

CLAIMS:

1. A disc drive mechanism (100) comprising:
an actuator (113) for controlling a substantially radial movement of a lens
(109) in response to an actuator control signal;
means (115) for generating the actuator control signal;
5 means (115) for supplying the actuator control signal to the actuator (113);
means (119) for determining an amplitude variation characteristic of the
actuator control signal, the amplitude variation characteristic being indicative of a variation
of the actuator control signal with time;
means (125) for determining an activation time for a position change actuator
10 signal component in response to the amplitude variation characteristic; and
means (123, 115) for including the position change actuator signal component
in the actuator control signal in response to the activation time.
2. A disc drive mechanism as claimed in claim 1 wherein the means (125) for
15 determining the activation time is operable to determine the activation time as a time when
the actuator control signal has an absolute value below a threshold.
3. A disc drive mechanism as claimed in claim 1 further comprising means for
determining a zero-crossing of the actuator control signal and wherein the means (125) for
20 determining the activation time is operable to determine the activation time in response to the
zero crossing.
4. A disc drive mechanism as claimed in claim 1 wherein the means (125) for
determining the activation time is operable to determine the activation time as a time when
25 the actuator control signal has an amplitude of an opposite polarity with respect to a polarity
of the position change actuator signal component.
5. A disc drive mechanism as claimed in claim 4 wherein the means (125) for
determining the activation time is further operable to determine the activation time as a time

resulting in a time interval associated with the position change signal for which the minimum absolute amplitude of the actuator control signal within the time interval is substantially maximized.

- 5 6. A disc drive mechanism as claimed in claim 4 wherein the means (125) for determining the activation time is further operable to determine the activation time as a time for which the absolute amplitude is above a threshold.
- 10 7. A disc drive mechanism as claimed in claim 6 further comprising means for determining the threshold in response to a signal amplitude of the position change actuator signal component.
- 15 8. A disc drive mechanism as claimed in claim 6 further comprising means for dynamically determining the threshold in response to at least one measured characteristic of the actuator control signal.
- 20 9. A disc drive mechanism as claimed in claim 1 wherein the amplitude variation characteristic comprises an amplitude variation characteristic of a tracking actuator signal component of the actuator control signal.
- 25 10. A disc drive mechanism as claimed in claim 1 further comprising means for determining a position change size and wherein the means (125) for determining the activation time is operable to determine the activation time as a time when the actuator control signal has an absolute value below a threshold if the position change size is below a threshold, and to determine the activation time as a time when the actuator control signal has an amplitude of an opposite polarity with respect to a polarity of the position change signals if the position change size is above the threshold.
- 30 11. A disc drive mechanism as claimed in claim 1 wherein the means (125) for determining the activation time is operable to determine a first interval in which the actuator control signal has a first polarity and a second interval in which the actuator control signal has a second opposite polarity and to determine a first activation time for an acceleration position change actuator signal component in the first interval and a second activation time for a deceleration position change actuator signal component in the second interval.

12. A disc drive mechanism as claimed in claim 1 wherein the amplitude variation characteristic is indicative of a variation of the actuator control signal with a rotation angle of a disc.

5

13. A disc drive mechanism as claimed in claim 1 wherein the position change actuator signal component is an acceleration position change actuator signal component.

14. A disc drive mechanism as claimed in claim 1 wherein the position change
10 actuator signal component is a deceleration position change actuator signal component.

15. A disc drive mechanism as claimed in claim 1 wherein the actuator control signal is a voltage signal.

15 16. A disc drive mechanism as claimed in claim 1 wherein the actuator control signal is a current signal.

17. A method of operation for a disc drive mechanism (100) comprising an actuator (113) for controlling a substantially radial movement of a lens (109) in response to
20 an actuator control signal; the method comprising the steps of:

generating the actuator control signal;
supplying the actuator control signal to the actuator;
determining an amplitude variation characteristic of the actuator control signal, the amplitude variation characteristic being indicative of a variation of the actuator
25 control signal with time;
determining an activation time for a position change actuator signal component in response to the amplitude variation characteristic; and
including the position change actuator signal component in the actuator control signal in response to the activation time.